

IN THE CLAIMS

Please cancel claims 1-21, and 26-93 without prejudice.

The following listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Pending Claims:

1 1-21. (Cancelled)

2 22. (Original) A method of regenerating optical  
3 signals in an all-optical cross-connect switch, the method  
4 comprising:  
5 providing one or more smart port cards, each of the  
6 one or more smart port cards including an optical-  
7 electrical-optical converter in an optical path, the  
8 optical-electrical-optical converter to convert an input  
9 optical signal into an electrical signal and the electrical  
10 signal into an output optical signal, the output optical  
11 signal being responsive to the input optical signal;  
12 providing one or more passive port cards, the one or  
13 more passive port cards without an optical-electrical-  
14 optical converter; and  
15 generating an optical path through an optical switch  
16 fabric of optical switches for optical signals to flow  
17 between the one or more smart port cards and the one or  
more passive port cards.

1 23. (Original) The method of claim 22 wherein

2 the optical-electrical-optical converter is in the  
3 input optical path of each of the one or more smart port  
4 cards; and

5 the generating of the optical path through the optical  
6 switch fabric couples the input optical path of the smart  
7 port cards to the output optical path of the passive port  
8 cards.

1 24. (Original) The method of claim 22 wherein

2 the optical-electrical-optical converter is in the  
3 output optical path of each of the one or more smart port  
4 cards; and

5 the generating of the optical path through the optical  
6 switch fabric couples the input optical path of the passive  
7 port cards to the output optical path of the smart port  
8 cards.

1 25. (Original) The method of claim 22 wherein

2 the optical-electrical-optical converter monitors the  
3 optical signal.

1 26-93. (Cancelled)

1 94. (Original) An apparatus for regenerating  
2 optical signals in an all-optical cross-connect switch, the  
3 apparatus comprising:

4 a smart port card, the smart port card including  
5 an optical-electrical-optical converter in an optical  
6 path, the optical-electrical-optical converter to convert

7 an input optical signal into an electrical signal and the  
8 electrical signal into an output optical signal.

1 95. (Original) The apparatus of claim 94 wherein  
2 the output optical signal is substantially similar to  
3 the input optical signal.

1 96. (Original) The apparatus of claim 94 wherein  
2 the optical-electrical-optical converter provides  
3 wavelength conversion such that the output optical signal  
4 has substantially similar information content as that of  
5 the input optical signal but a differing photonic  
6 wavelength.

1 97. (Original) The apparatus of claim 94 wherein  
2 the optical-electrical-optical converter is in the  
3 input optical path of the smart port card.

1 98. (Original) The apparatus of claim 94 wherein  
2 the optical-electrical-optical converter is in the  
3 output optical path of the smart port card.

1 99. (Original) The apparatus of claim 94 wherein  
2 the optical-electrical-optical converter provides a  
3 tap to the electrical signal to monitor the optical signal.

1 100. (Original) A method of regenerating optical  
2 signals in an all-optical cross-connect switch, the method  
3 comprising:

4        converting a first optical signal into an electrical  
5 signal;  
6        converting the electrical signal into a second optical  
7 signal, the second optical signal being responsive to the  
8 first optical signal; and  
9        forming an optical path through an optical switch  
10 fabric of optical switches over which optical signals can  
11 be transported through the optical cross-connect switch.

1        101. (Original)        The method of claim 100 wherein  
2        the converting of the first optical signal into the  
3 electrical signal and the converting of the electrical  
4 signal into the second optical signal are performed in an  
5 input optical path to the all-optical cross-connect switch.

1        102. (Original)        The method of claim 100 wherein  
2        the converting of the first optical signal into the  
3 electrical signal and the converting of the electrical  
4 signal into the second optical signal are performed in an  
5 output optical path from the all-optical cross-connect  
6 switch.

1        103. (Original)        The method of claim 100 wherein  
2        the converting of the first optical signal into the  
3 electrical signal and the converting of the electrical  
4 signal into the second optical signal regenerates the first  
5 optical signal.

1        104. (Original)        The method of claim 100 wherein

2 the converting of the first optical signal into the  
3 electrical signal allows for monitoring of the first  
4 optical signal.

1 105. (Original) The method of claim 100 wherein,  
2 the first optical signal has a first wavelength and  
3 the second optical signal has a second wavelength differing  
4 from the first wavelength.